CLAIM AMENDMENTS:

Claims 1-9 (Cancelled)

10. (Previously presented) A two-stage low pressure reaction process for the catalytic hydrotreatment of heavy petroleum hydrocarbons containing a high content of metals, total sulfur, asphaltenes and total nitrogen to improve the properties of the feed hydrocarbons, limit the formation of sediment and sludge, and attain a high removal of contaminants, said process comprising subjecting said heavy petroleum hydrocarbon feedstock to a first and a second reaction stage, wherein each of said stages is conducted at a pressure of 40 to 130 kg/cm^2, a temperature of 320° to 450°C, a space velocity (LHSV) of 0.2 to 3.0 h^{-1}, and a hydrogen/hydrocarbon ratio (H_2/HC) of 350 to 1,200 ln/l.

11. (Previously presented) The two-stage reaction process of claim 10, wherein hydrodemetallization of hydrocarbons and hydrocracking of asphaltenes is conducted in said first stage.

12. (Previously presented) The two-stage reaction process of claim 11, wherein hydrodesulfurization and hydrodenitrogenation of hydrocarbons is conducted in said second stage.

13. (Previously presented) The two-stage reaction process of claim 12, wherein the first reaction stage is conducted at a pressure of 45 to 90 kg/cm^2, a temperature of 350° to 450°C, a space velocity (LHSV) of 0.2 to 2.0 h^{-1}, and a hydrogen/hydrocarbon ratio (H_2/HC) of 450 to 1,050 ln/l.

14. (Previously presented) The two-stage reaction process of claim 13, wherein the second reaction stage is conducted at a pressure of 45 to 90 kg/cm^2, a temperature of 330° to

450°C, a space velocity (LHSV) of 0.2 to 2.0 h^{-1}, and a hydrogen/hydrocarbon ratio (H_2/HC) of 450 to 1,050 ln/l.

15. (Previously presented) The two-stage reaction process of claim 14, wherein said process minimizes the formation of sediments and sludge to a maximum value of 0.65 % by weight of the hydrotreated hydrocarbon.

16. (Currently amended) The two-stage reaction process of claim [[15]] 14, wherein said heavy hydrocarbon feed comprises less than 80% by volume of distillates recovered @ 538°C and an API gravity below 32°.

17. (Previously presented) The two-stage reaction process of claim 16, wherein conversion values of up to 70 % by volume of the feed stock are obtained.

18. (Previously presented) The two-stage reaction process of claim 14, wherein the properties of the product compared with the feedstock comprise an increase in API gravity up to approximately 15 units and in the content of distillates recovered @ 538°C up to approximately 50 % by volume, as compared with the feed.

19. (Previously presented) The process of claim 10, wherein each said reaction stage is conducted in a fixed-bed reactor or ebullated-bed reactor.

20. (Previously presented) The process of claim 19, wherein each of said reaction stages is conducted in a fixed bed reactor.

21. (Previously presented) The process of claim 19, wherein each said reaction stage contains a hydrotreatment catalyst.

22. (Previously presented) The process of claim 19, wherein each reaction stage is conducted in an ebullated bed reactor.

23. (Previously presented) The process of claim 20, wherein said first reaction stage contains a hydrodemetallization catalyst and said second reaction stage contains a hydrodesulfurization catalyst.

24. (Currently amended) The process of claim 22, wherein the hydrodemetallization catalyst ~~and the hydrodesulfurization catalyst~~ is a nickel-molybdenum catalyst.

25. (Previously presented) The process of claim 24, wherein each of said catalysts is supported on gamma alumina.

26. (Currently amended) A two-stage reaction process for the catalytic hydrotreatment of heavy petroleum hydrocarbons containing a high content of metals, total sulfur, asphaltenes and total nitrogen, which process comprises

a) passing hydrogen and a heavy petroleum hydrocarbon feedstock having a specific gravity less than 32° API and a content of distillates recovered @ 538°C less than 80% by volume to a first reaction stage for hydrotreatment of said feedstock, said first reaction stage comprising a fixed bed or ebullated bed reactor containing a ~~hydrodemetallization~~ nickel-molybdenum catalyst on a gamma-alumina support and operated to provide a pressure of 40 to 130 kg/cm^2, a temperature of 320° to 450°C, a space velocity (LHSV) of 0.2 to 3.0 h^{-1}, and

a hydrogen/hydrocarbon ratio (H_2/HC) of 350 to 1,200 ln/l, so to form a hydrotreated heavy hydrocarbon,

b) passing hydrogen and said hydrotreated heavy hydrocarbon to a second reaction stage in a fixed bed or ebullated bed reactor containing a ~~hydrodesulfurization~~ cobalt-molybdenum catalyst on a gamma-alumina support for hydrotreatment at a pressure of 40 to 130 kg/cm^2, a temperature of 320° to 450°C, space velocity (LHSV) of 0.2 to 3.0 h^{-1}, and a hydrogen/hydrocarbon ratio (H_2/HC) of 350 to 1,200 ln/l, wherein the amount of sediment and sludge formed in each of said first and second reaction stages is less than 0.8% by weight of the hydrotreated hydrocarbon.

27. (Previously presented) The two-stage reaction process of claim 26, wherein the amount of sediment and sludge formed in each of said first and second reaction stages is less than 0.65% by weight of the hydrotreated hydrocarbon.

28. (Previously presented) The product produced by the process of claim [[18]] 25.

29. (New) The two-stage reaction process of claim 10, wherein the amount of sediment and sludge formed in each of said first and second reaction stages is less than 0.65% by weight of the hydrotreated hydrocarbon.

30. (New) The two-stage reaction process of claim 29, wherein a nickel-molybdenum catalyst supported on gamma alumina is used in the first reaction stage.